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Clinical Microbiology and Infection xxx (xxxx) xxx

Contents lists available at ScienceDirect

Clinical Microbiology and Infection

journal homepage: www.clinicalmicrobiologyandinfection.com

Review

# Implications from COVID-19 for future pandemic global health governance

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ARTICLE INFO

*Article history:*
Received 9 December 2022
Received in revised form
13 March 2023
Accepted 25 March 2023
Available online xxx

Editor: L. Leibovici

*Keywords:*
Accountability
COVID-19
Enforcement
Global health governance
Health policy
Pandemics
Public health
Public policy
Strategies

ABSTRACT

*Background:* Limitations of current global health governance revealed during the COVID-19 pandemic can inform the ongoing deliberations of an international treaty on pandemics.
*Objectives:* To report on WHO definitions for governance and the enforcement of treaties in the context of a proposed international treaty on pandemics.
*Sources:* This narrative review was based on keyword searches related to public health, global health governance, and enforcement in PubMed/Medline and Google Scholar. Snowballing for additional articles followed the keyword search review.
*Content:* WHO lacks a consistent definition of global health governance. Moreover, in its current state, the proposed international treaty on pandemics lacks articulated compliance, accountability, or enforcement mechanisms. Findings reveal that humanitarian treaties often fail to achieve their aims absent clear enforcement mechanisms. The proposed international treaty on public health is garnering a range of perspectives. Decision-makers should evaluate whether a globally aligned definition of global health governance is needed. Decision-makers should also consider whether the proposed international treaty on pandemics should be opposed if it lacks sufficiently clear compliance, accountability, and enforcement mechanisms.
*Implications:* To our knowledge, this narrative review is believed to be the first of its kind to search scientific-oriented databases regarding governance and international pandemic treaties. The review includes several findings that advance the literature. These findings, in turn, reveal two key implications for decision-makers. First, whether an aligned definition for governance addressing compliance, accountability, and enforcement mechanisms is needed. Second, whether a draft treaty lacking enforcement mechanisms should be approved. **Jeffrey V. Lazarus, Clin Microbiol Infect 2023;▪:1**


## Background

The earliest days of the COVID-19 pandemic revealed remarkable multinational coordination and, paradoxically, nationalistic protectionism, illustrating serious gaps in global cooperation and solidarity. For example, most of the world benefited from coordinated vaccine development efforts [1]. Yet, more than a year after the introduction of vaccines, several low-income countries

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https://doi.org/10.1016/j.cmi.2023.03.027
1198-743X/

continue to face inequitable vaccine access [2], notwithstanding repeated promises to the contrary [3,4].

Despite pre-existing preparedness assessments and numerous institutions contributing to global health governance, pandemic prevention, preparedness, and response (PPR) were and continue to be insufficient [5]. Three years after SARS-CoV-2 identification, COVID-19 persists as a global public health threat [6], and the WHO still considers the pandemic to be in an emergency phase [7]. Continued loss of human life and well-being contribute to an increasing disease burden [3], while many pressing global economic and socio-political challenges remain.

In this article, we conducted a narrative review of multinational governance implications for future PPR, drawing on experiences from the COVID-19 pandemic. We emphasise: (a) an observed gap in clear, working definitions of governance in the global public health community; (b) the importance of enforcement in multinational agreements impacting global public health generally and PPR specifically; and (c) global consideration of an international treaty in 2024 on pandemics and global health security. As a result of the findings, we propose a set of considerations for decision-makers involved in the International Negotiating Body (INB), which is currently undertaking negotiations for a new pandemic treaty, to address gaps in the three main aforementioned areas to improve the likeliness of its effectiveness. A summary of the considerations and proposals can be found in Table 1.

## Sources and search strategy

We searched the literature using relevant headings and keywords for the concepts 'global health governance', 'governance strategies', 'health system preparedness', 'pandemic preparedness', 'enforcement mechanisms', 'accountability mechanisms', 'international treaty on pandemics', and 'COVID-19 response'.

Our review focused primarily on the PubMed/Medline database and, secondarily, on Google Scholar. We used snowballing to construct PubMed and Google Scholar searches, with keywords and themes from widely cited articles. We further conducted a narrowly tailored search limited to the WHO's website to identify WHO's definitions of governance (please see supplementary material), which yielded 122 results.

The search string on PubMed (please see supplementary material) provided a total of 211 articles. Of these, 26 articles were selected for further review based on whether they provided information on 2 main categories: international treaties and agreements, regulations or organisations related to global health security, and their enforcement, accountability, and compliance as well as applicability mechanisms.

Our international pandemic treaty-specific search string in Google Scholar (please see supplementary material) yielded a total of 70 articles. Of these, 17 articles were selected for further review based on the aforementioned criteria.

An additional 20 articles were reviewed via snowballing after a review of the references included in publications from the PubMed and Google Scholar search results.

From all the articles that were selected for further revision, a total of 54 articles were ultimately included in the review.

## Governance definitions

Our narrative review addresses the practical applications of governance for governments in the context of future PPR. Established in 1948, the WHO, by its definition, is "the United Nations (UN) agency that connects nations, partners, and people to promote health, keep the world safe and serve the vulnerable—so everyone, everywhere can attain the highest level of health". Considering that the scope and meaning of governance within the WHO are particularly important, the zero draft of the pandemic treaty should envision a further expansion of global governance duties and expectations of and by the WHO [8]. Although other global public health organisations exist, we limited this portion of our narrative review to the WHO, given its mandate. From our search of WHO's website, WHO has publicly published more than one definition of governance concerning global health (Table 2) [9–12].

We note several important governance concepts from WHO's definitions: (a) accountable actors may be governments or others; (b) the scope includes both whole-of-government and whole-of-society approaches; (c) governance processes are multi-faceted (e.g. oversight, regulation, and system design); (d) the purpose is the pursuit of health; and (e) the ethics of governance includes fairness and equity, representation, and accountability. From the WHO's deeper discussion of the Transparency, Accountability, Participation, Integrity, and Capacity framework noted above in one of the definitions, examples of 'accountability' provided within the framework include contracts; other financial mechanisms, codes of conduct, and choice mechanisms that let users 'vote with their feet'; however, we note that enforcement mechanisms are not included in WHO's several definitions [11]. Assuming a future pandemic planning and response treaty does result in the expansion of WHO's global role, we believe that decision-makers at the treaty level and within WHO alike should consider whether the definitions' inconsistencies, generally, and the lack of consideration of the role of enforcement in governance, specifically, should be addressed.

**Table 1**
Summary of considerations for international treaties on pandemics decision-makers.

| | |
|---|---|
| Governance | 1. Should global collaboration take place to clarify the WHO's definition of governance for global health purposes, highlighting areas of agreement and disagreement? |
| Enforcement mechanisms | 2. Should a new pandemic treaty be undertaken and ratified only if operationally feasible enforcement mechanisms are included? |
| | 3. In the case of a failed attempt to include enforcement mechanisms in the new pandemic treaty, should regional forms of multinational coordination be further amplified from the zero draft as an alternative and potentially more efficacious action to enable future cooperation among nations? |
| | 4. Should a new organisation similar in scope, reach, and funding to the World Trade Organization be considered and created by the international community to increase the likelihood of efficacy for future pandemic prevention, preparedness, and response treaties and multilateral agreements? |
| Global health security architecture | 5. Should the new pandemic treaty include mechanisms to monitor countries' compliance with any new regulations, commitments, and expectations? |
| | 6. Should the International Negotiating Body in charge of the current negotiations for the new pandemic treaty expand discussions for the elaboration of enforcement, accountability, and compliance mechanisms for the treaty's final form? |
| Rogue State Actors | 7. Should an international treaty on pandemic prevention, preparedness, and response be silent on regional and global responses to rogue state actors? |

Please cite this article as: Lazarus JV et al., Implications from COVID-19 for future pandemic global health governance, Clinical Microbiology and Infection, https://doi.org/10.1016/j.cmi.2023.03.027

**Table 2**
Select WHO definitions of 'governance' within the context of global health.

| |
|---|
| -"Leadership and governance involve ensuring strategic policy frameworks exist and are combined with effective oversight, coalition-building, regulation, attention to system design and accountability" [9]. |
| -"Governance includes evidence-based policy development that informs decision-making on issues related to public health by upholding the key governance principles of fairness, accountability, transparency, and participation" [10]. |
| -"Governance is a broad and complex topic with many overlapping definitions, frameworks and recommendations, but governance concepts and ideas found in the literature can broadly be grouped into five key domains: Transparency, Accountability, Participation, Integrity, and Capacity" [11]. |
| -"[G]governance for health is defined as the attempts of governments or other actors to steer communities, countries, or groups of countries in the pursuit of health as integral to well-being through both whole-of-government and whole-of-society approaches". |
| -"At its most basic level, governance systems define who decides on policies, how resources are distributed across society, and how governments are held accountable" [12]. |

*Governance definitions—a recommendation*

Based on our review, we recommend that decision-makers consider whether to revisit WHO's definition(s) of governance, at minimum, to clarify the definition of governance for global health purposes, highlighting areas of agreement and disagreement for decision-makers. If decision-makers elect to revisit the definition, we further recommend that decision-makers consider engaging in a rigorous consensus process inclusive of global collaboration, such as by employing the Delphi methodology [6].

## Enforcement mechanisms

Consider: the naming and protection of cheeses in Europe are managed by effective enforcement mechanisms that emphasise geography, heritage, branding, and shared trade markets [13]. In contrast, a recent meta-analysis [14] challenges conventional wisdom and concludes that most humanitarian treaties do not achieve desired objectives. In the early days of the pandemic, was public health more like feta cheese (vigorously protected through enforcement) or like human rights (under-enforced and largely performative)?

In the spring of 2020, the pandemic prompted systems-level failures concerning personal protective equipment (PPE) (e.g. face masks and surgical gloves). Many governments did not provide adequate access to PPE (e.g. early in-fighting between the U.S. government and major PPE manufacturers) [15,16]. Notwithstanding ovations towards assistance and multilateralism [17,18], many G20 country responses were protectionist limitations on trade and exports of PPE [19] and other medical supplies and equipment (e.g. ventilators) [17]. Notable nativist examples from major suppliers include the United States [20], Germany [21], and France [22]; China was observably a rare exception [23] to these early, protectionist responses.

With that as background, much of our narrative review assessed whether, absent enforcement, accountability, and compliance mechanisms, a new global health security treaty or agreement addressing future PPR is likely to be successful [14,24].

Our findings include significant discussion in the literature about the need for a renewed framework on global health security to address effective PPR in future health emergency crises or infectious disease outbreaks [25–27]. From the 54 articles selected, 2 main themes arose among those articles that reflected on the causes for non-compliance: 24 articles suggested that the lack of accountability (transparency, monitoring, and oversight) and unenforceability (no penalty or sanction) are key reasons for non-compliance: WHO does not have the power to prevent nations from disregarding their technical guidance under the International Health Regulations 2005 (IHR 2005). On the other hand, three articles have advocated for the need to reform the global health security architecture and international law to include enforcement and accountability mechanisms to design and develop more effective international treaties and agreements with the possibility to yield positive results.

IHR 2005, adopted by 196 countries, is a legally binding, broadly multinational instrument on PPR and public health emergencies. IHR 2005 acts as a mechanism for global health security by empowering the WHO with responsibility for global surveillance of health threats and granting the Director-General the authority to declare a Public Health Emergency of International Concern [28]. Once declared, IHR 2005 mandates a response from countries by activating mitigation efforts, resource mobilisation, and international cooperation [29]. That said, IHR 2005 is lacking enforcement mechanisms [30].

Although state parties have a legal obligation to comply with the 2005 IHR requirements [31], the literature suggests that most simply do not [25,30,32]. The cause of this general behaviour appears to be the lack of capacity of IHR to enforce accountability and compliance mechanisms (transparency, oversight, complaint, and penalisation or sanctions for non-compliance) [33–36] because they 'do not provide WHO with adequate power to impose sanctions, intervene, or hold States Parties accountable for breaches or non-compliance', meaning that WHO does not possess the necessary authority to effectively execute this agreement' [25]. This is highly relevant because it means that although the content of such agreements remains of prime importance, agreement on the mechanisms and timeliness of implementation and enforcement is the crucial factor for effective results [37]. Formal enforcement mechanisms can be understood as a distinctive characteristic of those international treaties that have proved to be effective in their implementation by incentivising compliance and penalising non-compliance through sanctions [24,38,39]. Broader examples include the Marrakesh Agreement establishing the World Trade Organization and the UN Charter [37].

As noted by Hoffman et al. [24] (2015), "[e]xamples of institutional mechanisms include automatic penalties, sanctions, mandatory arbitration, regular reporting requirements, and compliance assessments". The 'paradox of empty promises' [40], the phenomenon has been observed whereby nation-states can benefit from virtue signalling associated with signing yet, face few—if any—specific, negative consequences for failure to meet the terms of the treaty.

*Enforcement mechanisms—recommendation*

In the absence of effective mechanisms, global PPR governance may remain enfeebled and risk repeats of the protectionist, non-collaborative forms of response witnessed during the early days of the COVID-19 pandemic. Global PPR might also exacerbate the risks posed by the 'paradox of empty promises', thereby increasing, not reducing, inequities [40]. We suggest three important considerations for decision-makers before relying on treaties as a form of interstate governance for global public health in the context of PPR. Enforcement, in that case, would include mechanisms to compel

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the implementation of agreed-upon actions as well as adherence to the underlying ethical principles.

First, unless *enforcement mechanisms* are well-drafted, operationally feasible, and supported by all signatories to the treaty, decision-makers should consider whether the treaty should be undertaken and ratified. This is, in large part, because the treaty may not likely meet its objectives absent enforcement, accountability, and compliance [14,24].

Second, our examination of PPR suggests that regional forms of multinational coordination may have been more efficacious than truly 'global', universal attempts [41,42]. Worth further research and consideration is whether the warp-and-weft from multiple, regional, multilateral agreements may yield local/regional resilience to enable future effective PPR among nations.

Third, we believe that despite their shortcomings, an organisation strategically similar to the World Trade Organization [43] or the International Criminal Court [44] in global scope, clarity with respect to the reach of compliance, accountability, and enforcement mechanisms, and sufficient funding, although assuredly tactically distinct given a focus on pandemic planning and response, should be debated by decision-makers and considered by the international community to increase the likelihood of efficacy for future PPR treaties and other multilateral PPR agreements, working as a peer-organisation to WHO.

Although not as directly addressed in the meta-analysis of treaties, we also observe that approaching the PPR with the starting assumption that the international community *wants* to act in a coordinated fashion in response to pandemics may be erroneous. This assumption would benefit from further research, findings from which may prove instructive for consideration in future treaties and other multinational PPR efforts.

## An international treaty on pandemics

The COVID-19 pandemic revealed gaps that need to be addressed in global health security architecture, especially in terms of coordination, collaboration, and implementation of PPR policies [5]. Accordingly, in November 2021, the World Health Assembly established an INB to provide a new legal instrument to address the observed gaps in PPR [5]. In July 2022, the INB secured the accord under Article 19 of the WHO Constitution, which grants the WHO the authority to negotiate a legally binding Convention or Agreement and requires ratification by countries consistent with their local law [45]. Assuming completed negotiations, the new legal agreement is intended to be adopted in May 2024. As of 1 February, 2023, a zero draft for future discussion and deliberation has also been published [8].

### *An international treaty on pandemics findings*

Our review's findings provide evidence of important, evolving discussions in the literature about the deliberations of an international treaty on pandemics. Based on the results of our analysis, it appears that current systems of international law in global health and legal instruments have proven to be unable to fully meet the requirements and mechanisms needed to effectively mitigate the threats posed by pandemics with a magnitude similar to that of COVID-19.

Notwithstanding the observed hesitancy to engage treaty powers in the context of WHO [46], the pandemic has prompted a global consideration of an international treaty on pandemics [47]. In support of those discussions, the UN University International Institute for Global Health has published extensive background research and analyses [28]. WHO's Framework Convention on Tobacco Control is observed as a precedent for a pandemic treaty [28,46,48].

The consideration of an international treaty on pandemics has also prompted a wide range of perspectives on several aspects of the proposed treaty. These include the broad category of governance, such as governance concerning global health [47], considerations for the role of the UN, for WHO as a specialized agency of the UN [47], expectations of nation-states who would become signatories to the treaty, as well as practical implications regarding possible changes to IHR [28]. These also include potential impacts of such a treaty on human rights [49], likely geographic heterogeneity [48], demographics (e.g. children) [50], key market stakeholders (e.g. intellectual property owners) [51,52], and vulnerable populations because of lack of access to preventative care treatments (e.g. treatment and vaccine equity) [49,53]. The importance of multilateralism is also generally observed concerning global health threats [46] (e.g. 'the COVID-19 pandemic demonstrated that no government could address the threat of this or future pandemics on its own') [48]. Commentators note that the new treaty should incorporate a mechanism that would enable monitoring of state parties' compliance with the pandemic accord and timely, complete, and robust reports on their obligations [45].

The zero draft of the pandemic treaty [8] includes articles on oversight mechanisms, the use of diplomacy to arrange and settle agreements for potential disputes, and mechanisms of regional coordination to enable future PPR mechanisms among nations. More particularly, the zero draft presently provides for (a) as-of-yet unclear, unwritten oversight mechanisms to be adopted by the governing body (draft Article 22), (b) an expectation that signatories will use 'diplomatic channels' for settlement of disputes (draft Article 36, paragraph 1); and (c) that, 'a party *may declare* (emphasis ours) in writing to the *depositary* that, for a dispute not resolved in accordance with paragraph 1 of this article, it accepts, as compulsory ipso facto and without special agreement, in relation to any party accepting the same obligation: (a) submission of the dispute to the International Court of Justice; and/or (b) ad hoc arbitration in accordance with procedures to be adopted by consensus by the governing body" (draft Article 36, paragraph 2). The zero draft also accounts for the possibility of regional coordination (Article 2, paragraph 3): "The provisions of the WHO CA + shall in no way affect the right of *parties* to enter into bilateral or multilateral instruments, including regional or subregional instruments". However, the zero draft falls short of providing transparency and detail for the implementation of enforcement, accountability, and compliance mechanisms and stays silent on the question of addressing rogue nation-states during a future pandemic. This can be problematic because, as suggested above, one cannot assume that the entire international community will be willing to coordinate and act collectively in response to pandemics in the future.

### *An international treaty on pandemics—recommendations*

Given the observed lack of clarity for enforcement, accountability, and compliance mechanisms already discussed above, we believe that the parties deliberating the creation of a new pandemic treaty should include mechanisms that would allow independent bodies to monitor countries' compliance with the new regulations that would be put in place through accountability as well as enforcement mechanisms. Because enforcement, accountability, and compliance mechanisms are not yet fully elaborated in the zero draft and have only been considered to a minimal extent in discussions [45], we believe that decision-makers must consider whether to prioritize addressing these gaps.

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## Strengths and limitations

Narrative reviews are in part interpretive and qualitative. It is possible that the researchers subjectively biased the following: (a) keyword selection; (b) the databases searched; (c) the interpretation of the search results; and (d) what conclusions were drawn from the results. We believe that including multidisciplinary co-authors is one form of mitigation for these risks.

Concerning the primary database used, PubMed, limitations and risks include the following: (a) key phrases observed in the broader literature on the COVID-19 pandemic yet not reflected in PubMed's phrase index; and (b) key phrases found in the tables of COVID-19 pandemic-related literature garnering significant attention as measured by Altimetric, yet were not retrievable in PubMed searches. Because this narrative review is also primarily focused on the review of the literature in a science-oriented database, PubMed, an additional risk is that literature from other disciplines, particularly self-published, non-indexed 'grey literature', is not findable via the chosen methodology. Finally, the challenge of making all evidence easily available through searches should not be underestimated [54].

## Conclusions and implications

This article brings novelty to the existing literature via a narrative review specifically focused on governance definitions and enforcement mechanisms concerning the proposed international treaty on pandemics. The review also recommends a consensus process that can help to bring forward a globally aligned definition of governance, especially because it relates to global health. The findings amplify other voices calling for decision-makers to closely examine and potentially reject a proposed international treaty on pandemics that does not include sufficiently clear compliance, accountability, and enforcement mechanisms. Without enforcement, accountability mechanisms, and compliance capacities, a new treaty seems unlikely to successfully achieve desired health outcomes.

Because enforcement, accountability, and compliance mechanisms are still not sufficiently elaborated in the zero draft and appear to have only been minimally considered to date, we strongly recommend that the INB addresses these gaps to improve the likeliness of future effectiveness.

## Author's contributions

We describe the contributions to this paper using the CRediT taxonomy. The first author is the lead and corresponding author. JVL supervised the article. JVL and CJK conceptualized the article. CPM, JVL, and CJK wrote the original draft. JVL, CPM, CJK, CB, WES, RS, and AEM reviewed and edited the article. JVL, CPM, and CJK designed the methodology. JVL, CPM, and CJK conducted the investigation. JVL administered the project.

## Transparency declaration

### *Conflict of interest*

JVL acknowledges grants from AbbVie, Gilead Sciences, MSD and Roche Diagnostics, speaker fees from AbbVie, Gilead Sciences, Intercept, Janssen and Novo Nordisk and consulting fees from Novavax; he is the chair of a Data Safety Monitoring Board or Advisory Board for the "Same-visit hepatitis C testing and treatment to accelerate cure among people who inject drugs (The QuickStart Study): a cluster randomized control trial" in Australia; he is member of the EASL Public Health and Policy Committee, a co-chair of HIV Outcomes, and a member of the board of directors of the SHARE Global Health Foundation; all outside of the submitted work. CPM, CJK, CB, WES, RS, and AEM have nothing to disclose. No external funding was received.

## Financial report

JVL and CPM acknowledge institutional support received by the Barcelona Institute for Global Health from the Spanish Ministry of Science, Innovation and Universities through the "Centro de Excelencia Severo Ochoa 2019-2023" Program (CEX2018-000806-S) and from the Government of Catalonia, Spain, through the CERCA Program.

## Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.cmi.2022.xx.xxx.

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Please cite this article as: Lazarus JV et al., Implications from COVID-19 for future pandemic global health governance, Clinical Microbiology and Infection, https://doi.org/10.1016/j.cmi.2023.03.027